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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,953	12/06/2000	Kenichiro Sato	Q62193	7258

7590

09/19/2006

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC  
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WASHINGTON, DC 20037-3213

EXAMINER
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CHU, JOHN S Y

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 09/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/729,953

Applicant(s)

SATO

Examiner

John S. Chu

Art Unit

1752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/023,801.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

This Office action is in response to the response filed June 30, 2006.

***Claim Rejections - 35 USC § 103***

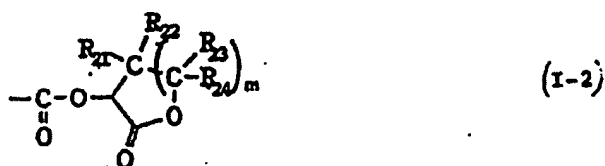
1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over NOZAKI et al (6,013,416).

Art Unit: 1752

6. (currently amended): A positive photoresist composition comprising a resin which has an ester group represented by the following general formula (I-2) in its molecule and is decomposed by action of an acid to increase solubility of the resin in an alkali solution, and a compound generating an acid by irradiation of an active light ray or radiation:



wherein  $R_{21}$  to  $R_{24}$ , which may be the same or different, each represents a hydrogen atom or an alkyl group; and  $m$  represents 1 or 2;

wherein said resin further contains (1) repeating structure units each having an alicyclic hydrocarbon moiety and further contains (2) repeating structure units each having a group which is decomposed by action of an acid to increase solubility of the resin in an alkali developing solution.

NOZAKI et al discloses in column 12, lines 24-31 that the polymer may contain two or more protected alkali-groups in combination, such that the claimed lactone monomer, an adamantyl acrylate monomer and a third alkali-soluble protected group can be used to form a terpolymer as taught in line 12 of column 12. Applicants amended claims are open and broad as to the third repeating unit (2) which is a group which is decomposed by the action of an acid. The third group is clearly taught and suggested in the art of NOZAKI et al.

It would have been prima facie obvious to one of ordinary skill in the art of chemically amplified photoresist composition to add a third alkali-soluble protected groups as suggested by NOZAKI et al to the any of the exemplified photoresist composition with a copolymer to give a terpolymer and reasonably expect same or similar results as disclosed for a photoresist composition that possesses high sensitivity, and excellent dry etch resistance without swelling.

The arguments by applicant along with the comparative evidence of Examples 8 and comparative Example 5 have been carefully considered, however the rejection is repeated based on the comparative evidence not being of proper scope, weight and character to overcome the prima facie case of obviousness. The comparative examples fail to compare the prior art copolymer having an adamantyl acrylate and a lactone containing monomer as seen in NOZAKI et al as a copolymer to the claimed terpolymer. In the specification the comparative examples exclude the lactone monomer and show an unexpected result over those copolymer which lack the lactone monomer of formula (I-2). Accordingly the rejection is repeated and made final.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. TAKEUCHI et al and SUWA are cited of interest.

which is different from an adamantyl acrylate which is disclosed in the NOZAKI et al.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 1752

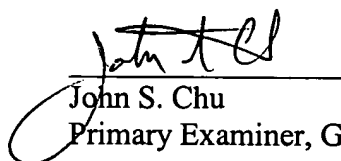
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Cynthia Kelly, can be reached on (571) 272-1526

The fax phone number for the USPTO is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John S. Chu  
Primary Examiner, Group 1700

J.Chu  
March 6, 2006